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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

1324.70181

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on October 20, 2006

Signature Josh C. Snider

Typed or printed name Josh C. Snider

Application Number

10/811,773

Filed

March 29, 2004

First Named Inventor

Minoru Otani

Art Unit

2871

Examiner

Chowdhury, Tarifur Rashid

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record. 47,954
Registration number _____

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____

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October 20, 2006

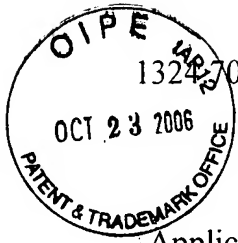
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
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132470181

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Otani et al.
Serial No.: 10/811,773
Conf. No.: 9505
Filed: March 29, 2004
For: METHOD OF
MANUFACTURING LIQUID
CRYSTAL DISPLAY PANEL
Art Unit: 2871
Examiner: Chowdhury, Tarifur Rashid

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October 20, 2006

Date

[Signature]
Registration No. 47,954
Attorney for Applicant(s)

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the Notice of Appeal filed concurrently herewith, Applicants respectfully request a Pre-Appeal Brief Conference and Review of the outstanding rejections in the present case, and also the withdrawal of these rejections. The reasons for this Request are as follows:

REMARKS

Applicants respectfully request a review and reversal of the Examiner's outstanding Section 103 rejection of claims 1 and 2 of the present invention based on the Admitted Prior Art ("the AAPA") in view of Terashita et al. (U.S. 6,057,038). A *prima facie* case of obviousness has not been established. The proposed combination of the two references fails to teach or suggest all of the claimed features and limitations of the present invention, and the rejection further fails to establish the obviousness of combining the two references to reach the present invention.

Section 2143.03 of the MPEP requires that the Examiner, when asserting a *prima facie* case of obviousness based on a combination of references, must first be able to point to where in the prior art is taught each and every feature and limitation of the present invention. In the present case, however, this requirement has not been met. Claims 1 and 2 of the present invention are method claims that require at least some order to several of the recited steps. The optical cleaning step of the present invention, for example, will be after the pillar spacers have been formed on the substrate, and by a light source having the additional features the Examiner admits are not present in the AAPA. The proposed combination cannot read upon all of these features together as a whole.

The Examiner correctly acknowledges that the AAPA fails to teach the entire optical cleaning step of claim 1. The Examiner further admits that the AAPA fails to teach an optical cleaning step that can avoid reduction in the thickness of the pillar spacers formed on the substrate, but merely declares that this particular limitation of the present claims is "deemed to be inherent or at least obvious," because "the claimed and

prior art products are identical or substantially identical in structure or composition.” This declaration, however, is flawed for at least two reasons: (1) the present claims are drawn toward a method of forming a product, and not the product itself – the rejection must establish that the prior art method is identical, and not the final product itself; and (2) the AAPA clearly shows how its final product is not identical.

Even if, for the purposes of this discussion only, the final prior art product were structurally identical to that formed by the present method, this fact alone would have little bearing upon the patentability of method claims. Novel method claims may still be patentable even if their finished product is not novel. In the present case, the AAPA process specifically cannot inherently or obviously avoid reduction in the thickness of the pillar spacers, as clearly featured in the present claims. As discovered by the present inventors, the optical cleaning step of the AAPA directly results in a reduction of the height of the pillar spacers, generating a problem of frame-edge unevenness. (See page 7, lines 1-3 of the present Specification). Therefore, not only does the AAPA fail to disclose this limitation of the present invention, the AAPA even teaches away from it.

Moreover, the Examiner’s assertion that the prior art products “are identical or substantially identical in structure or composition” to the product formed by the present method is directly contradicted by the AAPA itself. Pages 9-10 of the present Specification, along with Fig. 2, clearly show that the structure of the final prior art product is significantly different from the product of the present method. The AAPA pillar spacers are greatly reduced in height, whereas the pillar spacers formed according to the present method will not experience such undesirable height reduction. The height

of the pillar spacers is, by definition, a structural feature of the product. Accordingly, not only does the rejection fail to establish where the prior art teaches all of the claimed method steps, the rejection cannot even show that the final products are the same.

The proposed combination of the AAPA with Terashita fails to overcome these clear deficiencies in the AAPA. As previously argued, and not challenged on the record, the cited optical cleaning process from Terashita must be performed before the formation of pillar spacers, and is therefore not relevant to the different optical cleaning step recited in the present claims. One of ordinary skill in the art is well apprised that the present pillar spacers would have to be formed after Terashita forms its transparent conductive film, gate insulating film, and interlayer insulating film. The reference further describes how its process is only performed to improve the *adhesion between these three film layers* (col. 9, lines 44-46), and this result could not be obtained beneath pillar spacers already formed, because the process would not be able to penetrate through the entire height of the pillar spacers to reach the several layers underneath.

Terashita's process therefore, is performed both at a different point in time from the optical cleaning step of the present invention, and for a different purpose. Accordingly, the obviousness of combining Terashita with the AAPA has not been established, because the two different optical cleaning steps/processes are simply not the same. These particular arguments remain unanswered on the record. The Examiner has not, for example, cited to any teaching or suggestion from Terashita that directs one of ordinary skill in the art to substitute Terashita's earlier process any other potential optical cleaning step. At most, Terashita teaches nothing more than that its particular process is

useful to promote adhesion between layers. Terashita says nothing about pillar spacers, or the reduction in height of such pillar spacers.

The problem discovered and solved by the present inventors is a factor that is to be considered in determining the appropriateness of an obviousness rejection. Such a rejection may be defeated when the cited prior art fails to even recognize both the problem identified by the present inventors, as well as its solution. In the present case, it is undisputed that neither the AAPA nor Terashita recognize the pillar spacer height reduction problem identified and solved by the present inventors. Accordingly, a rejection based on obviousness is further inappropriate for at least these reasons.

The outstanding rejection should still further be withdrawn because the AAPA directly teaches away from the present claims. Any reference that teaches away from the claimed invention cannot form the basis of a rejection based on obviousness. In the present case, the AAPA expressly describes a method that will result in the undesirable height reduction of the pillar spacers, and thus directly teaches away from the present invention, and cannot form the basis of the proposed obviousness rejection.

For all of the foregoing reasons, Applicants submit that this Application, including claims 1-2, is in condition for allowance, which is respectfully requested.

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October 20, 2006

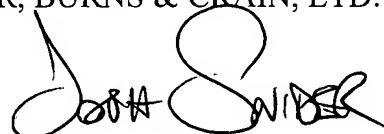
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Respectfully submitted,

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By



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